

1 **CLAIMS**

2 1. In an electronic document editor, a selection services component
3 comprising a selection services interface that provides one or more methods to
4 enable an editor extension to clear, add or remove a segment from a selection
5 object.

6
7 2. The selection services component as recited in claim 1, wherein one
8 of the methods provided further comprises a method that adds an element segment
9 to an editable selection.

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11 3. The selection services component as recited in claim 1, wherein one
12 of the methods provided further comprises a method that retrieves an interface for
13 a current editable selection which enables the editor to process certain selection
14 events.

15
16 4. The selection services component as recited in claim 1, wherein one
17 of the methods provided further comprises a method that adds a segment to an
18 editable selection.

19
20 5. The selection services component as recited in claim 1, wherein one
21 of the methods provided further comprises a method that removes a segment from
22 an editable selection.

1 6. The selection services component as recited in claim 1, wherein one
2 of the methods provided further comprises a method that sets a selection type.

3
4 7. In an electronic document editor, a selection services component
5 comprising a selection services listener interface that provides one or more
6 methods that are called by the editor when certain events occur for a selection
7 object that has a registered selection services listener interface.

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9 8. The selection services component as recited in claim 7, wherein one
10 of the methods that is provided further comprises a BeginSelectionUndo method
11 that is called at the beginning of an editing operation that may result in a change in
12 selection after the editing operation is completed.

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14 9. The selection services component as recited in claim 7, wherein one
15 of the methods that is provided further comprises an EndSelectionUndo method
16 that is called at the beginning of an editing operation that may result in a change in
17 selection after the editing operation is completed.

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19 10. The selection services component as recited in claim 7, wherein one
20 of the methods that is provided further comprises a method that provides the editor
21 with the name of a selection type.

1 **11.** The selection services component as recited in claim 7, wherein one
2 of the methods that is provided further comprises a method that is used by a
3 designer to implement custom processing when a type of a selection changes.
4

5 **12.** The selection services component as recited in claim 7, wherein one
6 of the methods that is provided further comprises a method that is called by the
7 editor whenever an element that intersects a selection is removed from a document
8 to allow a designer to update the selection.
9

10 **13.** In an electronic document editor, a selection services component
11 comprising an element segment interface that provides one or more methods that
12 enable a designer to control a fragment of markup in a current editable selection
13 that consists of a single element.
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15 **14.** The selection services component as recited in claim 13, wherein
16 one of the methods that is provided further comprises a method that retrieves an
17 element referred to in the method by a designer.
18

19 **15.** The selection services component as recited in claim 13, wherein
20 one of the methods that is provided further comprises a method that determines
21 whether a control element designated in the method by a designer is a primary
22 element of a multi-element selection.
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16. The selection services component as recited in claim 13, wherein one of the methods that is provided further comprises a method that sets or unsets a control element in a control selection as a primary element.

17. In an electronic document editor, a selection services component comprising a segment list interface that provides one or more methods that enable a designer to access information about a list of document segments in a current selection.

18. The selection services component as recited in claim 17, wherein one of the methods that is provided further comprises a method that creates an interface used by a designer to traverse members of a segment list.

19. The selection services component as recited in claim 17, wherein one of the methods that is provided further comprises a method that enables a designer to retrieve a type of a selection.

20. The selection services component as recited in claim 17, wherein one of the methods that is provided further comprises a method that enables a designer to determine whether a segment list is empty.

1 **21.** In an electronic document editor, a selection services component
2 comprising a segment interface that provides one or more methods that enable a
3 designer to create segments for fragments of HTML markup in a current editable
4 selection.

5
6 **22.** The selection services component as recited in claim 21, wherein
7 one of the methods that is provided further comprises a method that positions
8 markup pointers at a start and end of a selection segment.

9
10 **23.** A computer-readable medium having computer-executable
11 instructions for one or more interfaces that, when executed by an electronic
12 document editor on a computer, perform the following steps:

13 receiving parameters from a designer through a selection services interface;
14 utilizing the parameters to clear, add or remove a selected segment from a
15 selection object of an electronic document;
16 returning values to the designer regarding the state of the selected segment.

17
18 **24.** The computer-readable medium as recited in claim 23, wherein the
19 utilizing the parameters further comprises utilizing the parameters to add an
20 element segment to an editable selection.

1 **25.** The computer-readable medium as recited in claim 23, wherein the
2 utilizing the parameters further comprises utilizing the parameters to retrieve an
3 interface for a current editable selection which enables the editor to process certain
4 selection events.

5
6 **26.** The computer-readable medium as recited in claim 23, wherein the
7 utilizing the parameters further comprises utilizing the parameters to add a
8 segment to an editable selection.

9
10 **27.** The computer-readable medium as recited in claim 23, wherein the
11 utilizing the parameters further comprises utilizing the parameters to remove a
12 segment from an editable selection.

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14 **28.** The computer-readable medium as recited in claim 23, wherein the
15 utilizing the parameters further comprises utilizing the parameters to set a
16 selection type.

17
18 **29.** A computer-readable medium having computer-executable
19 instructions for one or more interfaces that, when executed by an electronic
20 document editor on a computer, perform the following steps:

21 receiving parameters from a designer through an element segment interface;
22 utilizing the parameters to control a fragment of markup in a current
23 editable selection that consists of a single element;
24 returning values to the designer regarding the fragment of markup.
25

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2 **30.** The computer-readable medium as recited in claim 29, wherein the
3 utilizing the parameters further comprises utilizing the parameters to retrieve an
4 element referred to in the method by a designer.
5

6 **31.** The computer-readable medium as recited in claim 29, wherein the
7 utilizing the parameters further comprises utilizing the parameters to determine
8 whether a control element designated in the method by a designer is a primary
9 element of a multi-element selection.
10

11 **32.** A computer-readable medium having computer-executable
12 instructions for one or more interfaces that, when executed by an electronic
13 document editor on a computer, perform the following steps:

14 receiving parameters from a designer through a segment list interface;

15 utilizing the parameters to access information about a list of document
16 segments in a current selection.;

17 returning values to the designer regarding the information.
18

19 **33.** The computer-readable medium as recited in claim 29, wherein the
20 utilizing the parameters further comprises utilizing the parameters to create an
21 interface used by a designer to traverse members of a segment list.
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1 **34.** The computer-readable medium as recited in claim 29, wherein the
2 utilizing the parameters further comprises utilizing the parameters to retrieve a
3 type of a selection to provide to the designer.

4
5 **35.** The computer-readable medium as recited in claim 29, wherein the
6 utilizing the parameters further comprises utilizing the parameters to determine
7 whether a segment list is empty.

8
9 **36.** A method for providing selection services to one or more extensions
10 in an extensible editor, the method comprising:

11 receiving a request from an extension to utilize a selection services
12 component;

13 facilitating the request by presenting a selection services interface that is
14 accessible by the extension; and

15 communicating with the extension through the selection services interface
16 to enable the extension to clear, add or remove a selected segment from a selection
17 object of an electronic document.

18
19 **37.** The method as recited in claim 36, wherein the selection services
20 interface further comprises a method to add an element segment to an editable
21 selection, and wherein the communicating further comprises communicating with
22 the extension through the selection services interface.

1 **38.** The method as recited in claim 36, wherein the selection services
2 interface further comprises a method to retrieve an interface for a current editable
3 selection which enables the editor to process certain selection events, and wherein
4 the communicating further comprises communicating with the extension through
5 the selection services interface.

6
7 **39.** The method as recited in claim 36, wherein the selection services
8 interface further comprises a method to add a segment to an editable selection, and
9 wherein the communicating further comprises communicating with the extension
10 through the selection services interface.

11
12 **40.** The method as recited in claim 36, wherein the selection services
13 interface further comprises a method to remove a segment from an editable
14 selection, and wherein the communicating further comprises communicating with
15 the extension through the selection services interface.

16
17 **41.** The method as recited in claim 36, wherein the selection services
18 interface further comprises a method to set a selection type, and wherein the
19 communicating further comprises communicating with the extension through the
20 selection services interface.

1 **42.** A method for providing selection services to one or more extensions
2 in an extensible editor, the method comprising:

3 receiving a request from an extension to utilize a selection services
4 component;

5 facilitating the request by presenting a selection services listener interface
6 that is accessible by the extension and that includes methods that are called by the
7 editor when certain events occur for a selection object that has a registered
8 selection services listener interface; and

9 communicating with the extension through the selection services listener
10 interface.

11
12 **43.** The method as recited in claim 42, wherein the selection services
13 listener interface further comprises a BeginSelectionUndo method that is called at
14 the beginning of an editing operation that may result in a change in selection after
15 the editing operation is completed.

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17 **44.** The method as recited in claim 42, wherein the selection services
18 listener interface further comprises an EndSelectionUndo method that is called at
19 the beginning of an editing operation that may result in a change in selection after
20 the editing operation is completed.

21
22 **45.** The method as recited in claim 42, wherein the selection services
23 listener interface further comprises a method that provides the editor with the
24 name of a selection type.
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1 **46.** The method as recited in claim 42, wherein the selection services
2 listener interface further comprises a method that is used by a designer to
3 implement custom processing when a type of a selection changes.

4
5 **47.** The method as recited in claim 42, wherein the selection services
6 listener interface further comprises a method that is called by the editor whenever
7 an element that intersects a selection is removed from a document to allow a
8 designer to update the selection.

9
10 **48.** A method for providing selection services to one or more extensions
11 in an extensible editor, the method comprising:

12 receiving a request from an extension to utilize a selection services
13 component;

14 facilitating the request by presenting an element segment interface that is
15 accessible by the extension and that includes methods that enable the extension to
16 control a fragment of markup in a current editable selection that consists of a
17 single element; and

18 communicating with the extension through the element segment interface.

19
20 **49.** The method as recited in claim 48, wherein the element segment
21 interface further comprises a method that retrieves an element referred to in the
22 method by a designer.

50. The method as recited in claim 48, wherein the element segment interface further comprises a method that determines whether a control element designated in the method by a designer is a primary element of a multi-element selection.

51. The method as recited in claim 48, wherein the element segment interface further comprises a method that sets or unsets a control element in a control selection as a primary element.

52. A method for providing selection services to one or more extensions in an extensible editor, the method comprising:

receiving a request from an extension to utilize a selection services component;

facilitating the request by presenting a segment list interface that is accessible by the extension and that includes methods that enable the extension to access information about a list of document segments in a current selection; and communicating with the extension through the segment list interface.

53. The method as recited in claim 52, wherein the segment list interface further comprises a method that creates an interface used by a designer to traverse members of a segment list.

1 **54.** The method as recited in claim 52, wherein the segment list
2 interface further comprises a method that enables a designer to retrieve a type of a
3 selection.

4
5 **55.** The method as recited in claim 52, wherein the segment list
6 interface further comprises a method that enables a designer to determine whether
7 a segment list is empty.

8
9 **56.** An electronic document editor stored on a computer-readable
10 medium, comprising:

11 a designer interface to transfer data between the editor and one or more
12 designers attached to the editor;

13 an event routing controller to route events received by the editor to the one
14 or more designers;

15 a selection services component that is configured to provide an extension
16 with a way to modify a selection process of the editor to which the designers are
17 coupled.

18
19 **57.** The electronic document editor as recited in claim 56, wherein the
20 highlight rendering services component further comprises a selection services
21 interface configured to enable a designer to clear, add or remove a segment from a
22 selection object.

1 **58.** The electronic document editor as recited in claim 56, wherein the
2 highlight rendering services component further comprises a selection services
3 listener interface that is accessible by the extension and that includes methods that
4 are called by the editor when certain events occur for a selection object that has a
5 registered selection services listener interface.

6
7 **59.** The electronic document editor as recited in claim 56, wherein the
8 highlight rendering services component further comprises an element segment
9 interface that is accessible by the extension and that includes methods that enable
10 the extension to control a fragment of markup in a current editable selection that
11 consists of a single element.

12
13 **60.** The electronic document editor as recited in claim 56, wherein the
14 highlight rendering services component further comprises a segment list interface
15 that is accessible by the extension and that includes methods that enable the
16 extension to access information about a list of document segments in a current
17 selection.